Mission Directorate: Cross-Agency Support

Overview

Cross-Agency Support (CAS) provides critical mission support capabilities necessary to ensure the efficient and effective operation and administration of the Agency that cannot be directly aligned to specific program or project requirements. These functions align and sustain institutional and program capabilities for supporting NASA's mission portfolio by leveraging resources to meet mission needs, establishing Agency-wide capabilities, and providing institutional checks and balances. NASA's CAS includes two themes: Center Management and Operations (CMO) and Agency Management and Operations (AMO). CAS capabilities ensure core services are ready and available for performing NASA mission roles and responsibilities. CAS institutional capabilities ensure that Agency operations are effective and efficient and that activities are conducted in accordance with all statutory, regulatory, and fiduciary responsibilities. CAS program capabilities ensure that vital skills and assets are ready and available to meet technical milestones for programs and projects; that missions and research are technically and scientifically sound; and that Agency practices adhere to standards and processes that provide safety and reliability through proper management of risk.

CMO directly supports Agency programs and projects that reside at and are executed by NASA Centers. This theme provides for the care of institutional assets, for establishing and maintaining the staff and their competencies, and for the maintenance and operation of facilities required by current and future programs and projects at nine Centers. Center Institutional Capabilities provides resources, oversees the assignment of workforce and facilities, and manages Center operations. Center Program Capabilities sustains the technical facilities, workforce expertise and skills, equipment, tools, and other resources required to facilitate program and project execution.

AMO activities provide policy and oversight to assure compliance with external and internal requirements, assure safety and mission success, and sustain Agency-wide critical capabilities. These activities provide management of human capital, acquisitions, financial performance, information technology, and performance improvement. AMO provides for near and long-term alignment of its human capital policy and a corporate approach to managing its unique or highly specialized facilities. AMO maintains a core complement of civil service professionals to resolve the Agency's financial, acquisition, and business challenges.

Mission Directorate: Cross-Agency Support

FY 2012 Budget Request

Budget Authority ($ millions)	FY 2010	Ann CR. FY 2011	Auth Act FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
FY 2012 President's Budget Request	**3,017.6**	**3,018.8**	**3,111.4**	**3,192.0**	**3,192.0**	**3,192.0**	**3,192.0**	**3,192.0**
Center Management and Operations	2,161.2	-	-	2,402.9	2,402.9	2,402.9	2,402.9	2,402.9
Agency Management and Operations	766.2	-	-	789.1	789.1	789.1	789.1	789.1
Institutional Investments	27.2	-	-	0.0	0.0	0.0	0.0	0.0
Congressionally Directed Items	63.0	-	-	0.0	0.0	0.0	0.0	0.0

Note:
In all budget tables, the Institutional Investments (II) budget has transferred to the new Construction and Environmental Compliance and Restoration (CECR) appropriation for FY 2010 and beyond. The remaining FY 2010 enacted funding includes labor and travel to support CECR activities. The II labor and travel budget transferred to Center Management and Operations in FY 2011. The Innovative Partnerships Program (IPP) has transferred to the new Aeronautics and Space Research and Technology appropriation in FY 2011.

The FY 2011 appropriation for NASA was not enacted at the time that the FY 2012 Request was prepared; therefore, NASA is operating under a Continuing Resolution (P.L. 111-242, as amended). Amounts in the "Ann. CR FY 2011" column reflect the annualized level provided by the Continuing Resolution.

The "Auth. Act FY 2011" column represents FY 2011 authorized funding from the NASA Authorization Act of 2010 (P.L. 111-267).

In accordance with the President's proposal to implement a five-year non-security discretionary spending freeze, budget figures shown for years after FY 2012 are notional and do not represent policy. Funding decisions will be made on a year-by-year basis.

Plans for FY 2012

Cross-Agency Support

Center Management and Operations

New Initiatives:

None

Major Changes:

The CMO FY 2012 budget request appears to differ significantly from the FY 2011 request because of the transfer of the civil service labor costs from CMO programs to CMO Civil Service Labor and Expenditures (CSLE). A total of $943.6 million was transferred from CMO programs to the CMO CSLE for labor, benefits, awards, and Center training.

Major Highlights for FY 2012

To support NASA missions, CMO provides continuing operations for nine Centers, including four major component facilities, in ten separate states. CMO ensures that Centers can provide the basic support required to meet internal and external requirements; effectively manage human capital, information technology, and facility assets; responsibly execute financial management and acquisition responsibilities; ensure independent technical oversight of NASA's programs and projects in support of safety and mission success; and provide a safe, secure, and environmentally sustainable workplace. These Center capabilities provide the services and products required by the programs and projects; enable technology innovation for NASA and the broader science and engineering communities; and serve as unique national capabilities to industry, academia, and government.

Agency Management and Operations

Major Changes:

The AMO FY 2012 budget request appears to differ significantly from the FY 2011 request because of the transfer of the civil service labor costs from the individual AMO programs to AMO CSLE. A total of $304.9 million was transferred from AMO programs to the AMO CSLE for labor, benefits, SES awards, Agency awards, and Agency training.

A zero-sum transfer was made within Safety and Mission Success to transfer $1.7 million to the Office of Safety and Mission Assurance for additional efforts toward the Micrometeoroid Orbital Debris program, in line with the NASA Authorization Act of 2010.

The FY 2012 funding request for Independent Verification and Validation (IV&V) is $20 million less that the FY 2012 request from the FY 2011 Budget Estimates book. The majority of this reduction ($15 million) is to restore IV&V funding to its FY 2008 funding level. The remainder of the $5 million difference represents the transfer of IV&V's civil service labor costs to AMO-Civil Service Labor and Expenditures.

Major Highlights for FY 2012

AMO provides for continuing operations of NASA Headquarters and management and oversight of Agency missions, functions, and Agency-wide mission support activities. AMO ensures that critical safety and mission success policies, procedures, and standards are in place for the safety and mission success of all NASA programs, projects and operations.

The Safety and Mission Success program will continue to administer and refine policies, procedural requirements, and technical standards. Safety and Mission Success program activities are a key component of the forums that provide advice to the Administrator, Mission Directorates, Center Directors, and program managers who are ultimately accountable for the safety and mission success of all NASA programs, projects, and operations. In FY 2012, AMO will support the NASA Engineering and Safety Center (NESC), NASA Safety Center (NSC), and IV&V Facility. The organizations will conduct independent research, audits, and assessments of NASA activities that have risk for loss or failure.

Strategic Capabilities Assets Program (SCAP) provides management and funding for identified critical facilities. The current portfolio consists of thermal vacuum chambers for the thermal testing of spacecraft, flight simulators that provide for simulation of air and space vehicle flight characteristics, and an arc jet facility for critical testing of re-entry materials.

Mission Directorate:	Cross-Agency Support
Theme:	Center Management and Operations

Theme Overview

NASA's Center Management and Operations (CMO) budget request funds the ongoing management, operations, and maintenance of nine NASA Centers, including four major component facilities, in 10 separate states. CMO provides Center Institutional and Program Capabilities to meet program requirements and schedules. The CMO budget enables the execution of NASA's mission at the Centers by providing the resources required to effectively oversee the assignment of workforce and facilities, and to manage Center operations to facilitate program and project execution while ensuring that statutory, regulatory, and fiduciary compliance requirements are met.

FY 2012 Budget Request

Budget Authority ($ millions)	FY 2010	Ann CR. FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
FY 2012 President's Budget Request	**2,161.2**	**-**	**2,402.9**	**2,402.9**	**2,402.9**	**2,402.9**	**2,402.9**
Center Management and Operations	2,161.2	-	1,319.6	1,305.7	1,257.6	1,204.3	1,148.5
CMO Civil Service Labor and Expenses	0.0	-	1,083.3	1,097.2	1,145.3	1,198.6	1,254.4

Note:
CMO Civil Service Labor and Expenses includes $35.1 million for Center-wide personnel costs for institutionally-funded training and permanent change of station.

The FY 2011 appropriation for NASA was not enacted at the time that the FY 2012 Request was prepared; therefore, NASA is operating under a Continuing Resolution (P.L. 111-242, as amended). Amounts in the "Ann. CR FY 2011" column reflect the annualized level provided by the Continuing Resolution.

In accordance with the President's proposal to implement a five-year non-security discretionary spending freeze, budget figures shown for years after FY 2012 are notional and do not represent policy. Funding decisions will be made on a year-by-year basis.

In FY 2012 through FY 2016, civil service labor and expenses (CSLE) funds are administered within a single consolidated account in each of the appropriations, and not allocated within the program amounts shown above. The allocation to each program is reflected in the summary budget table included in the beginning of this budget request, which provides a full cost view. In FY 2010 and FY 2011, amounts are presented in full cost.

Plans for FY 2012

Center Management and Operations

Activities funded within the CMO budget request include a wide variety of essential operations:

- Security, environmental management, and safety services to ensure that Centers meet basic workplace standards for the public and for the NASA workforce;

- Facility maintenance and operations, including utility funding, to support the Agency's infrastructure, including support to more than 4,800 buildings and structures with a current replacement value of over $27 billion;

- Information Technology services to provide video, voice, network, data center, and desktop computer support at the Centers;

- Program capability support required to ensure that the Agency's science, engineering, and technical authority staff have the resources, services, and laboratory support required to achieve the Agency's technical mission;

- Training, logistics, occupational health, and human resources services required to support the Agency's Center-based civil servants;

- Senior management, legal, equal employment opportunity, and public affairs support at the Centers; and

- Procurement and financial services supporting contract acquisition and financial management.

CMO Civil Service Labor and Expenses

This program contains labor funding (salary and benefits) for civil service employees at NASA's Centers who provide the above essential CMO services at the Center. In addition, it funds other Center civil service personnel costs such as institutionally funded training.

Relevance

Relevance to national priorities, relevant fields, and customer needs:

To accomplish its mission of space exploration, scientific discovery, and aeronautics research, NASA relies on its program and institutional capabilities. NASA develops energy and water conservation plans that enable execution of these capabilities in ways that enable progress towards the Nation's energy conservation goals.

Relevance to the NASA Mission and Strategic Goals:

CMO contributes to the Agency's strategic goals by enabling program and institutional capabilities to conduct NASA's aeronautics and space activities. These capabilities ensure that core services and resources are ready and available Agency wide for performing NASA's Mission roles and responsibilities; that Center operations are effective and efficient; and that activities are conducted in accordance with all statutory, regulatory, and fiduciary responsibilities.

Relevance to education and public benefits:

Strategic communications and education activities at the Centers keep stakeholders and the public informed in a way that helps them understand NASA policies, programs, and plans. These activities also fulfill the mandate of the National Aeronautics and Space Act of 1958 "[to] provide for the widest practicable and appropriate dissemination of information concerning its activities and results thereof."

Performance Achievement Highlights:

NASA Centers continue to provide high quality support for the execution of programs and projects. The budget supports NASA's ability to provide institutional support to the current programs, as well as new initiatives to reduce greenhouse gas emissions, while absorbing labor and utility cost increases.

To offset partially these increasing costs, NASA has implemented energy savings initiatives, consolidated activities, and reduced or deferred some CMO activities. As of the end of FY 2010, the Agency has decreased overall water usage by almost nine percent from 2007 baseline levels and has increased the use of renewable energy by six percent. NASA Centers, each of which has unique capabilities, developed master plans to guide a number of actions, such as consolidating and renewing needed capabilities, developing comprehensive energy and water conservation plans, and planning for repairs. These plans have been integrated at an Agency level, linking Center plans to program objectives and allowing for measurement of Agency-wide progress and trends.

NASA is working to meet energy intensity reduction goals of three percent per year and 30 percent by 2015, from the FY 2003 baseline. In an effort to assist Centers to administer their energy management programs, NASA Headquarters annually conducts Energy and Water Management Functional Reviews at a third of NASA Centers to help Centers improve their management systems and identify and implement energy conservation measures. NASA also initiated an Inter-Center Competition to reduce energy/water consumption. The competition encouraged Centers to implement low-cost and no-cost initiatives to reduce energy and water usage.

Mission Directorate:	Cross-Agency Support
Theme:	Center Management and Operations
Program:	Center Management and Operations

FY 2012 Budget Request

Budget Authority ($ millions)	FY 2010	Ann CR. FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
FY 2012 President's Budget Request	**2,161.2**	**-**	**1,319.6**	**1,305.7**	**1,257.6**	**1,204.3**	**1,148.5**
Center Institutional Capabilities	1,678.3	-	1,162.1	1,149.2	1,106.7	1,059.6	1,010.2
Center Programmatic Capabilities	482.9	-	157.5	156.5	151.0	144.8	138.3

Note:

The FY 2011 appropriation for NASA was not enacted at the time that the FY 2012 Request was prepared; therefore, NASA is operating under a Continuing Resolution (P.L. 111-242, as amended). Amounts in the "Ann. CR FY 2011" column reflect the annualized level provided by the Continuing Resolution.

In accordance with the President's proposal to implement a five-year non-security discretionary spending freeze, budget figures shown for years after FY 2012 are notional and do not represent policy. Funding decisions will be made on a year-by-year basis.

In FY 2012 through FY 2016, civil service labor and expenses (CSLE) funds are administered within a single consolidated account in each of the appropriations, and not allocated within the project amounts shown above. The allocation to each project is reflected in the summary budget table included in the beginning of this budget request, which provides a full cost view. In FY 2010 and FY 2011, amounts are presented in full cost.

Mission Directorate:	Cross-Agency Support
Theme:	Center Management and Operations
Program:	Center Management and Operations

Project Descriptions and Explanation of Changes

Center Institutional Capability

NASA's Center Institutional Capability encompasses a diverse set of activities including financial and human capital management, acquisition services, facility maintenance, utilities, information technology, and safety and security. This capability manages and sustains the Center staff, facilities, and operations required for program and project execution. It also provides for the ongoing operations of nine NASA Centers, including four major component facilities, ensuring a safe, healthy, and environmentally responsible workplace. Center institutionally sustained services are the most efficient approach to providing services and products required by programs as they implement their assigned missions. The Agency's coordinated approach to institutional management is an essential element in preserving unique national capabilities relied upon by NASA, industry, academia, and government.

NASA's participation in the President's Accountable Government Initiative has resulted in significant savings in administrative costs. The reduction of $62 million from the FY 2011 request is partially reflective of these savings, as well as NASA's adjustment to the Nation's current fiscal situation. However, contractor labor, utility, and operations costs continue to grow at a higher rate than inflation. Accounting for these necessary belt-tightening measures, the FY 2012 request funds Center Institutional Capability almost to FY 2008 levels by implementing initiatives to reduce travel, printing, reproduction, and other administrative costs.

The request for FY 2012 reflects a transfer of $604 million for labor and expenses to Center Management and Operations CSLE.

Center Program Capability

NASA's Center Program Capability supports the scientific and engineering staff across the Agency tasked with providing engineering assessment and safety oversight pertaining to the technical readiness and execution of NASA programs and projects. It also sustains NASA's analysis, design, research, test services, and fabrication capabilities enabling efficient execution of the programs and projects hosted at the Centers. A key component of NASA's overall system of checks and balances is provided within Technical Capabilities through formally delegated Technical Authorities. The Technical Authorities at NASA's Centers provide independent oversight and review of programs and projects in support of safety and mission success. This is to assure that NASA's activities are safely implemented in accordance with accepted standards of professional practice and applicable NASA requirements.

The request for FY 2012 reflects a transfer of $339 million for labor and expenses to Center Management and Operations CSLE.

Mission Directorate:	Cross-Agency Support
Theme:	Center Management and Operations
Program:	CMO Civil Service Labor and Expenses

FY 2012 Budget Request

Budget Authority ($ millions)	FY 2010	Ann CR. FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
FY 2012 President's Budget Request	**0.0**	**-**	**1,083.3**	**1,097.2**	**1,145.3**	**1,198.6**	**1,254.4**
Civil Service Labor and Expenses	0.0	-	1,083.3	1,097.2	1,145.3	1,198.6	1,254.4

Note: This program contains labor funding, both salary and benefits, for civil service employees at NASA's Centers who are assigned to work on projects in this mission support area. Also included is labor funding for 700 civil service FTE that have not yet been entirely planned against program content. It is expected that this currently undistributed workforce will be subsequently planned against Explorations Systems Mission Directorate, Space Operations Mission Directorate, and Space Technology programs once the work plans are complete. In addition, CMO Civil Service Labor and Expenses provides $35.1 million for Center-wide civil service personnel costs such as institutionally-funded training and permanent change of station. These funds support the critical skills and capabilities required to provide the institutional services that maintain Center Operations, as outlined in the other programs within this mission support area.

Program Overview

This program contains labor funding, both salary and benefits, for civil service employees at NASA's Centers who are assigned to work on projects in this mission support area. Also included is labor funding for workforce that has not yet been entirely planned against program content. It is expected that this currently undistributed workforce will be subsequently planned against Explorations Systems Mission Directorate, Space Operations Mission Directorate, and Space Technology programs once the work plans are complete. In addition, CMO Civil Service Labor and Expenses funds Center-wide civil service personnel costs such as institutionally-funded training. These funds support the critical skills and capabilities required to provide the institutional services that maintain Center Operations, as outlined in the other programs within this mission support area.

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations

Theme Overview

Agency Management and Operations (AMO) provides for the management and oversight of Agency missions, programs, functions and performance of NASA-wide mission support activities. AMO activities at NASA Headquarters ensure that: 1) core services are ready and available Agency-wide for performing mission roles and responsibilities; 2) Agency operations are effective and efficient; and 3) activities are conducted in accordance with all statutory, regulatory, and fiduciary requirements.

NASA Headquarters develops policy and guidance for the Centers and provides strategic planning and leadership on the issues concerning availability, readiness, and sustainability. Centers establish programs and initiatives to maximize individual and organizational capabilities. Headquarters establishes Agency-wide requirements and capabilities that improve collaboration, efficiency, and effectiveness. Agency management leverages resources and capabilities to meet mission needs, eliminate excess capacity, and scale assets accordingly.

AMO provides for policy-setting, executive management and direction for all essential corporate functions such as human capital, finance, information technology, infrastructure, procurement, chief counsel, protective services, occupational health and safety, equal opportunity and diversity, small business programs, external relations, and strategic communications. AMO also supports the operational costs of the Headquarters installation. The AMO Theme is divided into five programs: Agency Management, Safety and Mission Success (SMS), Agency Information Technology Services (AITS), Strategic Capabilities and Assets Program (SCAP), and AMO Civil Service Labor and Expenses (CSLE).

FY 2012 Budget Request

Budget Authority ($ millions)	FY 2010	Ann CR. FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
FY 2012 President's Budget Request	**766.2**	**-**	**789.1**	**789.1**	**789.1**	**789.1**	**789.1**
Agency Management	395.5	-	182.9	179.7	170.4	159.9	148.9
Safety and Mission Success	196.0	-	144.5	143.7	141.3	138.5	135.6
Agency IT Services (AITS)	145.3	-	136.4	136.2	135.5	134.7	133.8
Strategic Capabilities Assets Program	29.4	-	20.4	20.2	19.8	19.3	18.7
AMO Civil Service Labor and Expenses	0.0	-	304.9	309.3	322.2	336.8	352.0

Note:
AMO CSLE includes $18.7 million for Headquarters and Agency-wide personnel costs for training and permanent change of station.

The FY 2011 appropriation for NASA was not enacted at the time that the FY 2012 Request was prepared; therefore, NASA is operating under a Continuing Resolution (P.L. 111-242, as amended). Amounts in the "Ann. CR FY 2011" column reflect the annualized level provided by the Continuing Resolution.

In accordance with the President's proposal to implement a five-year non-security discretionary spending freeze, budget figures shown for years after FY 2012 are notional and do not represent policy. Funding decisions will be made on a year-by-year basis.

In FY 2012 through FY 2016, civil service labor and expenses (CSLE) funds are administered within a single consolidated account in each of the appropriations, and not allocated within the program amounts shown above. The allocation to each program is reflected in the summary budget table included in the beginning of this budget request, which provides a full cost view. In FY 2010 and FY 2011, amounts are presented in full cost.

Plans for FY 2012

Agency Management

The Agency Management Program will continue to deliver policies, controls, and oversight across a range of functional and administrative management service areas including procurement, finance, human capital, real property and infrastructure, protective services, diversity, equal opportunity, and small business. The Agency Management Program will continue to provide infrastructure support and facility operations for NASA Headquarters.

Safety and Mission Success

SMS will continue to administer and refine the pertinent policies, procedural requirements, and technical standards. SMS will participate in forums that provide advice to the Administrator, Mission Directorates, Center Directors, and program managers who are ultimately accountable for the safety and mission success of all NASA programs, projects, and operations. Plans for FY 2012 provide for an effective NESC, NSC, and IV&V. These activities represent established and recognized components of a comprehensive remedial response to lessons learned from NASA's greatest tragedies. These organizations form a basis for a disciplined execution of safety, reliability, quality, and system engineering expertise needed for the successful pursuit of NASA's missions.

Agency IT Services (AITS)

NASA will continue operations for essential AITS, such as the Agency business applications, the NASA Scientific and Technical Information (STI) program, NASA public Web portal, NASA Enterprise Architecture, and E-Government in FY 2012. The NASA Information Resources Management Strategic Plan focuses on four goals in this budget year associated with the AITS Program: 1) improve the management of information and information technology; 2) improve the security of NASA information and information technology; 3) improve information technology (IT) efficiency and collaboration capabilities; and 4) improve IT service delivery and visibility.

Strategic Capabilities Assets Program

SCAP will continue to provide management oversight and critical funding for NASA's assets. These assets include thermal vacuum chambers that provide capability for thermally testing spacecraft, flight simulators that test air and space vehicles flight characteristics, and arc jets that provides capability for critical testing of re-entry materials.

Relevance

Relevance to the NASA Mission and Strategic Goals:

AMO contributes to the Agency's strategic goals by enabling program and institutional capabilities to conduct NASA's aeronautics and space activities. AMO provides critical mission support activities that are necessary to ensure the efficient and effective operation and administration of the Agency but cannot be directly aligned to a specific program or project requirement. These functions align and sustain institutional and program capabilities essential for executing NASA's missions.

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations

Performance

Performance Commitments:

Measure #	Description	Contributing Program (s)
Strategic Goal 5	**Enable program and institutional capabilities to conduct NASA's aeronautics and space activities.**	
Outcome 5.1	**Identify, cultivate, and sustain a diverse workforce and inclusive work environment that is needed to conduct NASA missions.**	
Objective 5.1.1	**Establish and maintain a workforce that possesses state-of-the-art technical and business management competencies.**	
Performance Goal 5.1.1.1	***Define and build the federal workforce skills and competencies needed for the Agency's future directions in technology development and deep space exploration.***	
APG 5.1.1.1: AMO-12-1	Ninety percent of Shuttle workforce is assigned to follow-on work by FY 2012 year-end.	Agency Management
APG 5.1.1.1: AMO-12-2	Twenty percent or more of annual recruitments will be through the early career hiring initiatives.	Agency Management
Performance Goal 5.1.1.2	***Build skills across all levels of the workforce through Leadership Development Opportunities.***	
APG 5.1.1.2: AMO-12-3	Install an Agency-wide mentoring program that includes an automated system for matching mentors and mentees.	Agency Management
APG 5.1.1.2: AMO-12-4	Eighty percent of the Agency's leadership training and development programs include "leading through transformation" content.	Agency Management
Performance Goal 5.1.1.3	***Achieve and sustain an effective labor-management dialogue.***	
APG 5.1.1.3: AMO-12-5	Identify and address at least three significant labor-management challenges identified during the year during periodic Agency-led Labor Management Forums.	Agency Management
Performance Goal 5.1.1.4	***Adopt and respond to innovative employee feedback mechanisms.***	
APG 5.1.1.4: AMO-12-6	Seventy-five percent of NASA's primary installations implement improvement initiatives derived from the Federal Employee Viewpoint Survey.	Agency Management
Performance Goal 5.1.1.5	***Establish and maintain a workplace environment free of illegal discrimination, harassing conduct, and retaliation for Equal Employment Opportunity (EEO) activity and that provides reasonable accommodations to individuals with disabilities.***	
APG 5.1.1.5: AMO-12-7	Complete all FY 2012 actions described in the NASA Model Equal Employment Opportunity (EEO) Agency Plan.	Agency Management
Performance Goal 5.1.1.6	***Implement an Agency-wide Diversity and Inclusion Framework to develop a more demographically diverse workforce and a more inclusive work environment.***	
APG 5.1.1.6: AMO-12-8	Adopt diversity improvement targets derived from the results of the Agency-wide diversity-inclusion survey and other relevant workforce and U.S. population data.	Agency Management

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations

Performance

Performance Commitments:

Measure #	Description	Contributing Program (s)
Outcome 5.2	**Ensure vital assets are ready, available, and appropriately sized to conduct NASA's missions.**	
Objective 5.2.1	**Achieve mission success by factoring safety, quality, risk, reliability, and maintainability as integral features of programs, projects, technologies, operations, and facilities.**	
Performance Goal 5.2.1.1	***Through 2015, assure zero fatalities or permanent disabling injuries to the public.***	
APG 5.2.1.1: AMO-12-9	Assure zero fatalities or permanent disabling injuries to the public resulting from NASA activities during the fiscal year.	Safety and Mission Success
Performance Goal 5.2.1.2	***By 2015, achieve a four percent reduction in the total case rate and lost time rate for the NASA civil service work force.***	
APG 5.2.1.2: AMO-12-10	Reduce Total Case Rate and Lost Time Case Rate by one percent, in accordance with the President's Protecting Our Workers and Ensuring Reemployment (POWER) initiative.	Safety and Mission Success
Performance Goal 5.2.1.3	***By 2015, reduce damage to NASA assets by eight percent from the 2010 baseline.***	
APG 5.2.1.3: AMO-12-11	Reduce damage to NASA assets by two percent per fiscal year, based on a five-year running average.	Safety and Mission Success
Objective 5.2.2	**Provide information technology that advances NASA space and research program results and promotes open dissemination through efficient, innovative, reliable, and responsive services that are appropriately secure and valued by stakeholders and the public.**	
Performance Goal 5.2.2.1	***By 2014, consolidate and centralize the management of information technology (IT) enterprise services for end user services, communications, enterprise applications, enterprise data centers, and web services.***	
APG 5.2.2.1: AMO-12-12	Achieve Initial Operating Capability (IOC) for one Service Office (NASA Enterprise Data Center) and Full Operational Capacity (FOC) for the initial five Service Offices as part of the NASA Information Technology Infrastructure Integration Program (I3P).	Agency IT Services (AITS)
Performance Goal 5.2.2.2	***By 2015, implement a capability to identify and prevent unauthorized intrusions on the NASA institutional and mission networks.***	
APG 5.2.2.2: AMO-12-13	Implement intrusion detection sensors monitored by the NASA Security Operations Center (SOC) on 75 percent of NASA institutional network monitoring sites.	Agency IT Services (AITS)
Performance Goal 5.2.2.3	***By 2014, decommission the Agency Administrative mainframe computer.***	
APG 5.2.2.3: AMO-12-14	Migrate or retire all administrative systems from the Agency Administrative mainframe computer.	Agency IT Services (AITS)
Performance Goal 5.2.2.4	***By 2015, reduce data center energy consumption by 30 percent.***	
APG 5.2.2.4: AMO-12-15	Reduce the number of NASA data centers by 10 percent.	Agency IT Services (AITS)

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations

Performance

Performance Commitments:

Measure #	Description	Contributing Program (s)
Performance Goal 5.2.2.5	***By 2015, establish at least four innovation laboratories that provide more effective, efficient, and responsive information technology (IT) across NASA in support of the Agency's Mission.***	
APG 5.2.2.5: AMO-12-16	Implement a Communications and Collaboration Lab that conducts five evaluations to assess new approaches for the dissemination of information, and real-time, multi-participant knowledge creation and management.	Agency IT Services (AITS)
Objective 5.2.3	**Develop and implement long-range infrastructure plans that address institutional capabilities and critical assets, directly link to mission needs, ensure the leveraging of external capabilities, and provide a framework for Agency infrastructure decision-making.**	
Performance Goal 5.2.3.1	***Consolidate functions and offices to reduce real property need, and use Agency Integrated Master Plan to identify and dispose of excess and aged facilities beyond useful life.***	
APG 5.2.3.1: AMO-12-17	Finalize remaining Center Master Plans into the Agency Integrated Master Plan.	Agency Management
Outcome 5.5	**Establish partnerships, including innovative arrangements, with commercial, international, and other government entities to maximize mission success.**	
Objective 5.5.2	**Enhance international and interagency partnerships through increased use of international and interagency coordination mechanisms.**	
Performance Goal 5.5.2.1	***Actively engage and provide leadership in international and interagency forums.***	
APG 5.5.2.1: AMO-12-18	Establish an internal Interagency Partnerships Working Group (IPWG) led by the Office of International and Interagency Relations (OIIR) to improve Agency-wide coordination of interagency partnerships and related interagency working groups.	Agency Management

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations

Performance

Performance Commitments:

Measure #	Description	Contributing Program (s)
Strategic Goal 6	**Share NASA with the public, educators, and students to provide opportunities to participate in our Mission, foster innovation and contribute to a strong national economy.**	
Outcome 6.1	**Improve retention of students in STEM disciplines by providing opportunities and activities along the full length of the education pipeline.**	
Objective 6.1.3	**Assess grant recipient institutions throughout the education pipeline to ensure that grant recipients demonstrate a consistent commitment to civil rights compliance.**	
Performance Goal 6.1.3.1	***Promote equal opportunity compliance and encourage promising practices among NASA grant recipient institutions through a fully-realized program of civil rights compliance reviews, policy guidance, and technical assistance.***	
APG 6.1.3.1: AMO-12-19	Equal opportunity (EO) assessment and technical assistance provided, or onsite compliance assessment performed, on-location at five STEM or STEM-related programs that receive NASA funding.	Agency Management
Outcome 6.3	**Engage the public in NASA's missions by providing new pathways for participation.**	
Objective 6.3.1	**Extend the reach of participatory engagement across NASA.**	
Performance Goal 6.3.1.1	***By 2015, establish an Agency-wide portfolio of participatory engagement opportunities.***	
APG 6.3.1.1: AMO-12-20	Issue a competitive opportunity to engage the public in NASA's activities.	Agency Management
Outcome 6.4	**Inform, engage, and inspire the public by sharing NASA's missions, challenges, and results.**	
Objective 6.4.2	**Provide clear, accurate, timely, and consistent information that is readily available and suitable for a diverse audience.**	
Performance Goal 6.4.2.1	***Use current and emerging communications technologies to reach increasingly broad audiences.***	
APG 6.4.2.1: AMO-12-21	Evaluate communication tools for impact and establish Agency best practices.	Agency Management
Objective 6.4.3	**Provide the communications infrastructure to enable NASA's commitment to make government more open, transparent, and participatory.**	
Performance Goal 6.4.3.1	***Make available Agency records through the Freedom of Information (FOIA) and Privacy Act and Open Gov in accordance with federal laws and regulations.***	
APG 6.4.3.1: AMO-12-22	Finalize NASA Freedom of Information Act (FOIA) regulations.	Agency Management

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations

Uniform and Efficiency Measures:

Measure #	Description
Agency Management and Operations Theme	
APG EFF 5.2.1.2: AMO-12-10	Reduce Total Case Rate and Lost Time Case Rate by one percent, in accordance with the President's Protecting Our Workers and Ensuring Reemployment (POWER) initiative.
APG EFF 5.2.1.3: AMO-12-11	Reduce damage to NASA assets by two percent per fiscal year, based on a five-year running average.
APG EFF: AMO-12-20	Maintain system execution time during the year-end close process at FY 2010 baseline.

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations

Performance Achievement Highlights:

In FY 2010, NASA did the following:

- Improved its financial integrity audit opinion from "disclaimed" to "qualified," with no material weaknesses. A real property management system was integrated into NASA's financial management system, eliminating many manual reconciliation processes improving financial reporting. This opinion is the best NASA rating since FY 2002.

- Began successful implementation of an Agency Safety Center in Cleveland, Ohio. Accomplishments include developing a technical qualification program for Agency safety and mission assurance (SMA) technical excellence, trending of root causes and communicating lessons learned from mishap investigations, and improving the Agency SMA review and audit program.

- Enhanced online communications features providing the public easier access to NASA information, streamlining business processes, implementing cost efficiencies and one-NASA messaging, and managing approximately 500,000 public inquiries annually. NASA Television completed transition to high-definition capability for productions, operations, and distribution of high quality video related to NASA's missions and activities.

- Implemented the e-Mail Threat Monitoring Capability, reducing e-mail-based cyber attacks. NASA completed phase one of the IT Security Enterprise Data Warehouse, which collects and correlates patch status data, vulnerability scanning results, and security configuration information, producing an Agency-wide security inventory of NASA computers.

- Completed the Wide-Area Network eXpansion project, increasing the corporate wide area network bandwidth, including all connections to Centers and facilities.

- Implemented Identity Framework 2.0 as part of its Identity, Credential, and Access Management program to improve the initial Identity Management system. This addresses Homeland Security Presidential Directive (HSPD-12) requirements. As part of the effort to consolidate and improve NASA's IT infrastructure, the Agency awarded the Enterprise Applications Service Technologies contract.

- Successfully completed the four-year project to consolidate NASA's distributed active directory infrastructure. This supports the Federal Data Center Consolidation Initiative by consolidating an application and reducing the amount of infrastructure required to support the service. This supports implementing HSPD-12 as the consolidated active directory and the NASA single authentication infrastructure.

- Created an Open Government Status Dashboard, which details the status of the Agency ongoing goals and 164 milestones. NASA's plan to meet the Open Government Initiative Directive was rated first out of 29 agency submissions by OpenTheGovernment.org.

- Implemented an Agency-wide Emergency Notification System, allowing emergency managers to notify all badged employees and contractors of emergency situations at any Center.

- Completed initial assessments of all of its data centers to document the power meters necessary to begin calculating energy consumption and energy efficiency of the Agency data centers. This supported the Federal Data Center Consolidation Initiative and the NASA Strategic Sustainability Performance Plan.

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	Agency Management

FY 2012 Budget Request

Budget Authority ($ millions)	FY 2010	Ann CR. FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
FY 2012 President's Budget Request	**395.5**	**-**	**182.9**	**179.7**	**170.4**	**159.9**	**148.9**
Agency Management	395.5	-	182.9	179.7	170.4	159.9	148.9

Note:

The FY 2011 appropriation for NASA was not enacted at the time that the FY 2012 Request was prepared; therefore, NASA is operating under a Continuing Resolution (P.L. 111-242, as amended). Amounts in the "Ann. CR FY 2011" column reflect the annualized level provided by the Continuing Resolution.

In accordance with the President's proposal to implement a five-year non-security discretionary spending freeze, budget figures shown for years after FY 2012 are notional and do not represent policy. Funding decisions will be made on a year-by-year basis.

In FY 2012 through FY 2016, civil service labor and expenses (CSLE) funds are administered within a single consolidated account in each of the appropriations, and not allocated within the project amounts shown above. The allocation to each project is reflected in the summary budget table included in the beginning of this budget request, which provides a full cost view. In FY 2010 and FY 2011, amounts are presented in full cost.

Program Overview

Agency Management provides governance and functional and administrative management oversight for the Agency and operational support for NASA Headquarters. This program function primarily supports ongoing operations. Agency Management support reflects the activities required for being in business in the Federal sector and provides the capability to respond to legislation and other mandated services that the Agency must provide. Agency Management also conducts independent assessments of Agency programs and delivers strategic planning services. Through Agency Management efforts, NASA program and mission performance are assessed and evaluated.

Agency Management provides policies, controls, and oversight across a range of functional and administrative management service areas. Agency Management governance and oversight activities include finance, protective services, general counsel, public affairs, external relations, legislative affairs, training, human capital, procurement, real property and infrastructure, budget management, systems support, internal controls, diversity, equal opportunity, independent program and cost evaluation, and small business programs.

Agency Management activities are performed at NASA Headquarters with critical support provided by the NASA Centers. Distributed Agency Management activities are also performed at the NASA Management Office at the Jet Propulsion Laboratory, Johns Hopkins University-Applied Physics Laboratory, and the NASA Shared Services Center at Stennis Space Center. The Agency Management program supports over 35 discrete operations and mission support projects with over 210 separate activity line items.

The Agency Management program supports operational activities of Headquarters as an installation. These activities include building lease costs, facility operations costs (such as physical security, maintenance, logistics, information technology hardware and software costs), and automated business systems implementation and operations costs including initiatives related to transparency and accountability in government.

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	Agency Management

Plans For FY 2012

Agency Management will deliver policies, controls, and oversight across a range of functional and administrative management service areas, and provide independent assessments and strategic planning services. Agency Management will also direct activities in procurement, finance, human capital, real property and infrastructure, protective services, diversity, equal opportunity, and small business.

Project Descriptions and Explanation of Changes

Agency Management

The Agency Management budget includes the operational costs of NASA Headquarters. Headquarters operations elements include the lease costs for the rent of the Headquarters office building, and leased space in New Jersey and California that supports the Inspector General. Other significant operations activities include:

- IT and communications infrastructure hardware and software acquisitions and maintenance, and contracted services for IT support;

- Facility operations support, including physical security, custodial, and maintenance services; equipment; expendable supplies; mail services; printing and graphics; motor pool operations; logistics services; and emergency preparedness; and

- Human resources staffing; employee payroll and benefits processing; retirement services; employee training; employee occupational health/fitness and medical services; and grants awards processing.

Headquarters operations costs also include support provided by the Goddard Space Flight Center for:

- Accounting and procurement operations; operations support; configuration maintenance; automated business and administrative systems; contract close-out services; and payments to the Office of Naval Research for grants management; and

- Human resources; equal opportunity alternate dispute resolution services; Equal Employment Opportunity complaint investigations; and the special emphasis diversity recognition program.

Agency Management also provides the Agency-wide management functions of finance, protective services, and independent program and cost evaluation. The Chief Financial Officer (CFO) is responsible for the financial leadership of NASA. A primary duty of the CFO is to uphold strong financial management and accountability practices while providing timely, accurate, and reliable financial information, and enhancing internal controls.

The Office of Protective Services provides: Agency protective services policy formulation; oversight, coordination and management of NASA protective services operations, including security, fire, emergency management, and emergency preparedness; support for Agency counterintelligence and counterterrorism activities; implementation of the Identity, Credentials and Access Management Systems and other security systems, including communications; continuity of operations; and national intelligence community services.

Independent Program and Cost Evaluation is an independent assessment organization that provides objective, transparent, and multidisciplinary analysis to support strategic decision making.

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	Agency Management

Program Commitments

Commitment/Output FY 2012	Program/Project	Changes from FY 2011 PB Request
Ninety percent of Shuttle workforce is assigned to follow-on work by fiscal year 2012 year-end.	Agency Management	N/A
Twenty percent or more of annual recruitments will be through the early career hiring initiatives.	Agency Management	N/A
Install an Agency-wide mentoring program that includes an automated system for matching mentors and mentees.	Agency Management	N/A
Eighty percent of the Agency's leadership training and development programs include 'leading through transformation' content.	Agency Management	N/A
Identify and address at least three significant labor-management challenges identified during the year during periodic Agency-led Labor Management Forums.	Agency Management	N/A
Seventy-five percent of NASA's primary installations implement improvement initiatives derived from the Federal Employee Viewpoint Survey.	Agency Management	N/A
Complete all FY 2012 actions described in the NASA Model Equal Employment Opportunity (EEO) Agency Plan.	Agency Management	N/A
Adopt diversity improvement targets derived from the results of the Agency-wide diversity-inclusion survey and other relevant workforce and U.S. population data.	Agency Management	N/A
Finalize remaining Center Master Plans into the Agency Integrated Master Plan.	Agency Management	N/A
Establish an internal Interagency Partnerships Working Group (IPWG) led by the Office of International and Interagency Relations (OIIR) to improve Agency-wide coordination of interagency partnerships and related interagency working groups.	Agency Management	N/A
Equal opportunity (EO) assessment and technical assistance provided, or onsite compliance assessment performed, on-location at five STEM or STEM-related programs that receive NASA funding.	Agency Management	
Issue a competitive opportunity to engage the public in NASA's activities.	Agency Management	
Evaluate communication tools for impact and establish Agency best practices.	Agency Management	
Finalize NASA Freedom of Information Act (FOIA) regulations.	Agency Management	

Mission Directorate:	**Cross-Agency Support**
Theme:	**Agency Management and Operations**
Program:	**Agency Management**

Headquarters FTE Assignments by Office

Headquarters	FY 2010 Total FTE	FY 2010 SES	FY 2010 Non-Career	FY 2010 Contract WYE	FY 2011 Total FTE	FY 2011 SES	FY 2011 Non-Career	FY 2011 Contract WYE	FY 2012 Total FTE	FY 2012 SES	FY 2012 Non-Career	FY 2012 Contract WYE
Mission Support	**336**	**25**	**0**	**321**	**320**	**26**	**0**	**353**	**320**	**27**	**0**	**340**
Agency Operations/JPL												
NASA Management Office	25	2		2	28	2		3	28	2		3
Human Capital Management	36	5		7	35	5		21	35	5		21
Headquarters Operations	108	4		295	102	4		315	102	4		303
Infrastructure	61	5		10	57	6		4	57	7		4
Internal Controls and Management Systems	10	1		3	10	1		1	10	1		1
Procurement	36	4			33	4			33	4		
Mission Support Directorate Front Office	10	2			9	2		1	9	2		0
Protective Services	49	2		4	46	2		9	46	2		8

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	Safety and Mission Success

FY 2012 Budget Request

Budget Authority ($ millions)	FY 2010	Ann CR. FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
FY 2012 President's Budget Request	**196.0**	**-**	**144.5**	**143.7**	**141.3**	**138.5**	**135.6**
Safety and Mission Assurance	51.3	-	38.9	38.7	38.1	37.5	36.8
Chief Engineer	101.1	-	76.4	75.9	74.4	72.7	70.9
Chief Health and Medical Officer	3.6	-	4.1	4.1	4.1	4.1	4.1
Independent Verification and Validation	40.0	-	25.1	25.0	24.6	24.3	23.9

Note:

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In accordance with the President's proposal to implement a five-year non-security discretionary spending freeze, budget figures shown for years after FY 2012 are notional and do not represent policy. Funding decisions will be made on a year-by-year basis.

In FY 2012 through FY 2016, civil service labor and expenses (CSLE) funds are administered within a single consolidated account in each of the appropriations, and not allocated within the project amounts shown above. The allocation to each project is reflected in the summary budget table included in the beginning of this budget request, which provides a full cost view. In FY 2010 and FY 2011, amounts are presented in full cost.

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	Safety and Mission Success

Program Overview

Safety and Mission Success (SMS) includes the NASA Headquarters programs that address technical excellence, mission assurance, and technical authority. SMS includes the corporate work managed by the Office of the Safety and Mission Assurance (including the NSC and the IV&V), the Office of Chief Engineer (including the NESC), and the Office of the Chief Health and Medical Officer. The elements of SMS reflect the recommendations of many studies, boards, and panels including the direct recommendations from two major accident investigations resulting in the loss of 14 astronauts (Challenger in 1986 and Columbia in 2003). These programs directly support NASA's core values and serve to improve the likelihood for safety and mission success for NASA's programs, projects, and operations while protecting the health and safety of NASA's workforce. Aerospace technology advancement, because it is leading the edge of known capability, will always present a risk of catastrophe. SMS is the only resource that has the reduction of risk of failure as its exclusive focus.

SMS is responsible for developing policy and procedural requirements. SMS provides advice to the Administrator, Mission Directorates, Center Directors, and program managers who, due to their management responsibilities, are ultimately accountable for the safety and mission success of all NASA activities and the safety and health of the workforce. SMS resources provide the foundation for NASA's system of "checks and balances" enabling the effective application of the strategic management framework and the Technical Authorities defined in NASA's Strategic Management and Governance Handbook. SMS funding trains and maintains a competent technical workforce within the disciplines of system engineering (including system safety, reliability, and quality) and space medicine.

Resources provided by SMS are essential for judging the implications on safety and mission success, including the health and medical aspects of new requirements and departures from existing requirements. With this funding, discipline experts judge the criticality of the associated risk and evaluate the risk acceptability through an established process of independent review and assessment. The information and advice from these experts is critical data that is used by the technical authorities to develop authoritative decisions related to application of requirements on programs and projects.

Plans For FY 2012

In FY 2012, the individual plans for each element of SMS align with and directly support the objectives of the Agency's Mission Directorates by helping to improve the likelihood of safety and mission success for all NASA programs, projects, and operations. SMS managers will continue to administer and refine policies, procedural requirements, and technical standards. The managers will participate in forums that provide advice to the Administrator, Mission Directorates, Center Directors, and program managers who are ultimately accountable for the safety and mission success of all NASA programs, projects, and operations.

The plans for FY 2012 provide for an effective NESC, NSC, and IV&V as necessary elements in fulfilling the Agency's missions. This support assures that NASA civil service employees have, and continue to apply, the appropriate knowledge, skills, abilities, and tools for sound and well-informed decision making on matters critical to safety and mission success. The plans will include prioritized development, maintenance, and conduct of training and education necessary for assuring the existence of a competent technical workforce. The plans also include required support for independent research, audit, and assessment of NASA activities that have risk for loss or failure.

These organizations charter independent reviews that judge the safety and likelihood of success of NASA activities and the health of those individuals exposed to risks that are not commonplace. The ability to author effective requirements, evaluate precisely the departures from conformance with existing requirements, determine the criticality of the risk, and evaluate and advise on its acceptability are completely reliant on the proper investment in SMS. This established process of independent review supports informed decision-making through the execution of delegated technical authority applied to program and project decisions. Without a robust application of these resources, the Agency strategy to challenge the validity of complex engineering and operational plans and proposals is flawed and subject to incurring unnecessary risks.

Due to the tremendous energies possessed by space debris, the collision between a piece of debris only a half-inch in diameter and an operational spacecraft has the potential for catastrophic consequences. The intentional destruction of the Chinese Fengyun-1C weather satellite in January 2007 and the accidental collision of American and Russian spacecraft in February 2009 have increased the amount of cataloged debris by nearly 40 percent compared to debris levels from the first 50 years of the Space Age. In FY 2012, NASA, in connection with the U.S. Space Surveillance Network, will increase its effort in scientific studies to characterize the near-Earth space debris environment, to assess its potential hazards to current and future space operations, and to identify and implement methods for reducing the production of additional debris. Enhancements to this space situational awareness data program during FY 2012, especially close approach predictions, offer the greatest near-term and lowest-cost improvements to space safety. The National Academies' Aeronautics and Space Engineering Board (ASEB) is currently conducting a comprehensive review of NASA's Micrometeoroid and Orbital Debris (MMOD) program. NASA will take appropriate actions in response to the ASEB findings and recommendations.

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	Safety and Mission Success

Project Descriptions and Explanation of Changes

Safety and Mission Assurance (SMS)

SMS supports the Office of Safety and Mission Assurance (OSMA) by providing resources for independent evaluations of their approaches to improving mission success. OSMA is responsible for establishing and maintaining an acceptable level of technical excellence and competence in safety, reliability, maintainability, and quality engineering within the Agency. OSMA assures that the risk presented by either a lack of safety requirement or from lack of compliance with a safety requirement is analyzed, assessed, communicated, and used for proper decision making and risk acceptance by the appropriate organizational leader.

Fundamental to these two responsibilities is the definition and execution of a robust and well-understood methodology and process for the application of the disciplines of safety, reliability and quality (S, R and Q) in defining the level of risk. SMS conducts a schedule of review and assessments that focus on the life cycle decision milestones for crucial NASA programs and projects and S, R, and Q processes. Embodied in this program is a structured development of methodology and investigation into system attributes that improve the probability of mission success.

NSC assists OSMA in achieving its objectives in consolidating SMS efforts Agency-wide in four key areas: SMA technical excellence, knowledge management, audits and assessments, and mishap investigation support. Since being established in FY 2007, the NSC has:

1. Established a technical excellence initiative to improve and formalize training and qualification requirements for five SMA engineering disciplines (system safety, reliability and maintainability, quality, software assurance, and operational and aviation safety);

2. Undertaken streamlined processes to increase and sustain domain knowledge within the SMA community through the facilitation, storage, and retrieval of important documents and lessons learned by providing data analysis and trending of mishap-related data, by rapidly disseminating mishap-related Agency safety alerts, and by improving the Agency Incident Reporting Information System (a comprehensive, Agency-wide tool used for reporting mishaps and close calls);

3. Continued to evaluate and streamline the conduct of facilities, programmatic, and supplier audits; and

4. Assembled and deployed a trained team of mishap investigators to support mishap investigations boards. These activities promote the highest level of safety and reliability for NASA's programs and projects.

Chief Engineer

SMS supports the Office of Chief Engineer (OCE) by providing the resources for independent and senior engineering expertise to enhance mission success. OCE promulgates policy and requirements for program and project management, for the engineering excellence of the Agency, system engineering methodology, and for the Agency's system of engineering standards. The OCE manages the NESC, which is responsible for rapid, cross-Agency response to mission critical engineering issues and for improving the state of practice in critical engineering areas. OCE also sponsors the Academy of Program/Project and Engineering Leadership (APPEL) to develop program and project management and systems engineering skills.

APPEL delivers the necessary program/project management and engineering competence learning through the application of learning strategies, methods, models, and tools. APPEL provides professional development products and services for individual practitioners and program and project teams. This includes a formal training curriculum designed to address four career levels from recent college graduate to executive. APPEL provides direct support to project teams in the field through workshops, coaching, interactions technical experts, and through conferences, forums, and publications.

The NESC, established in FY 2003 in response to the Columbia accident, responds rapidly to cross-Agency mission-critical engineering issues and improves the state of the practice in critical engineering areas. The NESC performs value-added independent testing and analyses and technical assessments of NASA's projects and technical activities in order to enhance safety and mission success. The NESC works proactively to help NASA avoid problem recurrence and to prevent future problems. SMS funding provides for the core NESC organization of senior engineering experts from across the Agency, including the NASA Technical Fellows, and technical discipline teams composed of experts from NASA, industry, and academia.

Chief Health and Medical Officer

The Office of the Chief Health and Medical Officer (OCHMO) promulgates Agency health and medical policy, standards, and requirements, assuring the medical technical excellence of the Agency. OCHMO assures the physical and mental health and well-being of the NASA workforce, and assures the safe and ethical conduct of NASA-sponsored human and animal research. OCHMO exercises oversight of NASA medical and health related activities through audit processes. OCHMO monitors the implementation of health and medical related requirements and standards in all developmental human space flight programs through designated discipline experts at NASA Centers. OCHMO provides oversight of medical and health related activities in operational human space flight through Center-based discipline experts and clinical boards. Ongoing medical and health discipline professionalism and licensure are supported through annual certified continuing medical education activities and flight surgeon education and clinical currency is provided through OCHMO sponsored, university-based physician training programs. NASA's biomedical research programs in support of human space flight are guided by OCHMO-developed health and medical standards. Center-based review boards provide direct supervision of NASA-sponsored human and animal research safety and ethics, completing a comprehensive system of oversight to maintain robust health and medical support of NASA personnel at all levels.

Independent Verification and Validation

IV&V supports provides software expertise, services and resources to improve the likelihood for safety and mission success for NASA's programs, projects, and operations while protecting the health and safety of NASA's workforce. The NASA IV&V program performs independent software analysis activities on NASA's most critical software systems as a "checks and balances" to assure safety and mission success of those systems.

The IV&V program provides systems engineering activities that improve software S, R, & Q of NASA programs and projects through effective applications of systems and software IV&V methods, practices, techniques, and tools. The NASA IV&V program applies software engineering best practices to evaluate the correctness and quality of critical and complex software systems throughout the project's system development life cycle.

The IV&V program provides resources and expertise to other OSMA elements in support of independent evaluations of software related approaches and processes, developing software related policy/procedural requirements, and evaluating risks associated with new software requirements and departures from existing requirements. The IV&V program supports sustaining software technical excellence in the SMA community, sustaining software domain knowledge within the SMA organization, and in developing software development improvement recommendations to the Agency.

Program Commitments

Commitment/Output FY 2012	Program/Project	Changes from FY 2011 PB Request
Assure zero fatalities or permanent disabling injuries to the public resulting from NASA activities during the fiscal year.	Safety and Mission Success	N/A
Reduce Total Case Rate and Lost Time Case Rate by one percent, in accordance with the President's Protecting Our Workers and Ensuring Reemployment (POWER) initiative.	Safety and Mission Success	N/A
Reduce damage to NASA assets by two percent per fiscal year, based on a five-year running average.	Safety and Mission Success	N/A

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	Agency IT Services (AITS)

FY 2012 Budget Request

Budget Authority ($ millions)	FY 2010	Ann CR. FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
FY 2012 President's Budget Request	**145.3**	**-**	**136.4**	**136.2**	**135.5**	**134.7**	**133.8**
IT Management	15.0	-	13.1	13.1	13.1	13.1	13.0
Applications	75.4	-	57.6	57.5	57.0	56.4	55.8
Infrastructure	54.9	-	65.7	65.6	65.4	65.2	65.0

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In accordance with the President's proposal to implement a five-year non-security discretionary spending freeze, budget figures shown for years after FY 2012 are notional and do not represent policy. Funding decisions will be made on a year-by-year basis.

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Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	Agency IT Services (AITS)

Program Overview

The principles underlying the AITS Program are to enable NASA's missions through the integration of information and information technology in an efficient, effective, and secure, manner. Accordingly, the AITS Program provides for centrally managed, consolidated enterprise-level services benefitting the entire Agency. The three following projects constitute the AITS Program: IT Management; Applications; and IT Infrastructure, which includes IT security.

Within the IT Management project, NASA incorporates the necessary budget for the NASA Chief Information Officer (CIO) to ensure effective management of the Agency's IT resources in accordance with federal laws and regulations, Office of Management and Budget (OMB) guidance, and industry best practices. The IT Management project enables the Agency to meet requirements in areas such as privacy, records management, information collections, and information quality. It also supports value-add activities such as enterprise architecture, capital planning and investment control, and IT project management. Additionally, it incorporates payments to other Federal agencies for E-Government services.

Within the Applications project, NASA incorporates the development and sustaining support of Agency applications for mission support functions, such as financial management, supply management, procurement management, and human capital management. These services are provided by the NASA Enterprise Applications Competency Center in Huntsville, Alabama. The Applications project also includes enterprise licensing agreements and scientific and technical Information management on behalf of the Agency.

Within the IT Infrastructure project, NASA incorporates core IT and infrastructure services such as the NASA public Web portal, e-mail, calendaring, directory services, enterprise license management, identity and credential management. Due to the close relationship between IT infrastructure and IT security, NASA incorporates IT security-related initiatives within the IT Infrastructure project. These initiatives include the NASA Security Operations Center, Agency penetration testing, vulnerability scanning, patch management and reporting, and other proactive measures that mitigate security threats.

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	Agency IT Services (AITS)

Plans For FY 2012

In FY 2012, the AITS program will largely provide sustaining operations for essential Agency information management and IT needs under the IT Management project, Applications project and the IT Infrastructure project, with some development, modernization, and enhancement (DME) planned.

The Infrastructure project is planning significant activity for FY 2012 including the Router Replacement project, which is to replace aging equipment on the network and to upgrade the bandwidth on the network to accommodate the needs of current and future missions. The investment will encompass significant upgrades, as they are required to continue to provide high-quality service to the Agency's mission customer base. The existing routers are antiquated, use an obsolete protocol, and are no longer supported by the vendor. The risk to ongoing missions due to the aging equipment in the network is significant (and growing) and will be mitigated by this investment.

The IT Infrastructure and Security project is planning significant DME activities including implementation of new contracts for end-user services, integrated communications services (local and wide area networks), consolidated data center services, and public Web services. In addition, the Agency plans to implement an Enterprise Service Desk and Ordering System for Agency IT services beginning in FY 2011. The implementation of these new contracts and services will pave the way towards consolidation of NASA's networks and network management in order to gain efficiencies, improve security, and enable the cross-Center data sharing required to execute effectively NASA missions. In addition, it provides the means to consolidate data center capabilities in order to gain efficiencies and reduce related infrastructure on NASA Centers. Under the Consolidated end-user Services contract, NASA expects improved standardization of desktop and laptop configurations, as well as increased effectiveness in applying patches. In addition, NASA will invest in renewal of network infrastructure where necessary to mitigate risks of prolonged network outages, most notably by replacing obsolete routers on the mission network and replacing outdated wiring and electronics within some Center networks. This infrastructure will include the IT Innovation Laboratory support structure and evaluation process for innovation and emerging communication and collaborative technologies from NASA personnel, industry, and academic partners building on NASA Virtual Institutes work. NASA will continue development of NEBULA (NASA's Cloud Computing Platform), allowing NASA Scientist and Engineers to focus on mission success without worrying about the stability and availability of computing infrastructure.

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	Agency IT Services (AITS)

Project Descriptions and Explanation of Changes

IT Management

The IT Management project provides Agency level services for managing IT and meeting internal and external requirements relative to Agency CIO responsibilities. Included in this project are fees paid to E-Government managing partners for the various E-Government activities and Federal CIO Council Committees in which NASA participates. This project includes the budget for the NASA Office of the CIO to meet OMB guidance, Executive Orders, laws and regulations relative to E-Government, Paperwork Reduction and Information Collection, the Federal Information Security Management Act, Records Management, Mail Management, Forms Management, Privacy, Capital Planning and Investment Control, and IT Budget Formulation under Circular A-11.

Applications

The Applications project provides steady state operations of NASA's business and management systems developed under the Integrated Enterprise Management Program, such as, the Core Financial System (SAP), Integrated Asset Management System, the Human Capital Information Environment, and Aircraft Management Module. This project also provides scientific and technical information (STI) services for the Agency. It also supports the implementation of E-Government initiatives across the Agency, such as, E-Travel, Grants.gov, and E-Training.

Infrastructure

The IT Infrastructure project provides common core infrastructure services across the Agency, such as, the NASA public Web portal, enterprise licensing, and Personal Identification Verification card systems required for identity and credential management for logical access control. In addition, the IT Infrastructure project provides configuration control capabilities for networks, end-user services, and data centers. This project also provides IT security capabilities at the Agency level, such as the Security Operations Center (SOC), third party penetration testing, vulnerability scanning, and patch management. In FY 2012, an increase in funding will be applied to renew the aging IT network infrastructure, including the mission network. Additionally, NASA has begun realigning IT funds within the Agency to implement a common funding model for IT services beginning in FY 2011 and will complete the realignment in FY 2012. Under this model, e-mail, calendaring, directory services, software management and other core Agency infrastructure services will be provided by the Agency end user services contract and funded by the AITS IT Infrastructure project. In FY 2011 NASA realigned the Agency's IT Infrastructure funding to NEBULA (NASA's Cloud Computing) to enhance the cloud computing infrastructure. In FY 2012, NASA will enable automated provisioning capabilities to quickly scale up computing, storage, and bandwidth as demand rises, allowing NASA scientists and engineers to focus on mission success with stability and availability of computing infrastructure. NASA is also building the infrastructure and evaluation processes for innovation and emerging communication and collaborative technologies to support the IT Innovation Lab in FY 2012. Through this activity, NASA will evaluate new approaches to the dissemination of information with real-time, multi-participant work. NASA is collaborating with Science on the Open Government Initiative, social computing, telepresence, telerobotics, Web-based collaboration, secure collaborations, unified communications, virtual workspaces, broad access, and related technologies.

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	Agency IT Services (AITS)

Program Commitments

Commitment/Output FY 2012	Program/Project	Changes from FY 2011 PB Request
Achieve Initial Operating Capability (IOC) for one Service Office (NASA Enterprise Data Center) and FOC for the initial five Service Offices as part of the NASA Information Technology Infrastructure Integration Program (I3P).	AITS	N/A
Implement intrusion detection sensors monitored by the NASA Security Operations Center (SOC) on 75 percent of NASA institutional network monitoring sites.	AITS	N/A
Migrate or retire all administrative systems from the Agency Administrative mainframe computer.	AITS	N/A
Reduce the number of NASA data centers by 10 percent.	AITS	N/A
Implement a Communications and Collaboration Lab that conducts five evaluations to assess new approaches for the dissemination of information, and real-time, multi-participant knowledge creation and management.	AITS	N/A
Maintain system execution time during the year-end close process at FY 2010 baseline.	AITS	N/A

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	Strategic Capabilities Assets Program

FY 2012 Budget Request

Budget Authority ($ millions)	FY 2010	Ann CR. FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
FY 2012 President's Budget Request	**29.4**	**-**	**20.4**	**20.2**	**19.8**	**19.3**	**18.7**
Strategic Capabilities Assets Program	29.4	-	20.4	20.2	19.8	19.3	18.7

Note:

The FY 2011 appropriation for NASA was not enacted at the time that the FY 2012 Request was prepared; therefore, NASA is operating under a Continuing Resolution (P.L. 111-242, as amended). Amounts in the "Ann. CR FY 2011" column reflect the annualized level provided by the Continuing Resolution.

In accordance with the President's proposal to implement a five-year non-security discretionary spending freeze, budget figures shown for years after FY 2012 are notional and do not represent policy. Funding decisions will be made on a year-by-year basis.

In FY 2012 through FY 2016, civil service labor and expenses (CSLE) funds are administered within a single consolidated account in each of the appropriations, and not allocated within the project amounts shown above. The allocation to each project is reflected in the summary budget table included in the beginning of this budget request, which provides a full cost view. In FY 2010 and FY 2011, amounts are presented in full cost.

Program Overview

NASA's Strategic Capabilities Assets Program (SCAP) ensures that identified operational core assets and capabilities are available to support NASA's current and future missions. SCAP establishes an alliance between all Centers with like assets, makes decisions on disposition of capabilities no longer required, identifies re-investment/re-capitalization requirements within and among classes of assets, and implements changes. SCAP reviews the assets' capabilities each year to ensure the requirements continue to be valid.
SCAP ensures that essential test facilities are in a state of readiness. It maintains the skilled operational workforce and performs essential preventative maintenance to keep core facilities available to meet program requirements. Core capabilities supported within SCAP are thermal vacuum chambers, simulators, and the arc jet facility.

Plans For FY 2012

SCAP will sustain the strategic technical capabilities needed by NASA for successful missions. SCAP will institute consistency in reimbursable pricing policies, perform quarterly program performance reviews, continually reassess the strategy, and provide a forum for cooperation between all Centers within asset classes.

SCAP will ensure maximum benefit across the Government by broadening its alliances outside of the Agency for capabilities (e.g., thermal vacuum chambers). This has been accomplished by initiating a new collaborative working group, the Space Environment Test Alliance Group, which includes NASA, the Department of Defense (DoD), and other entities. SCAP has established a good relationship between DoD and NASA in the arc jet test area. SCAP will examine and scrutinize new proposals for additional capabilities that are submitted as part of the FY 2013 budget process.

SCAP is committed to continue developing and implementing disposition plans for assets that are no

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	Strategic Capabilities Assets Program

Project Descriptions and Explanation of Changes

Strategic Capabilities Assets Program

SCAP sustains operations of simulators that are critical components of the success of NASA's Aeronautics Research in the areas of fundamental aeronautics and aviation safety. This capability includes an array of research and development crewed flight simulator assets at Ames Research Center (ARC) and Langley Research Center (LaRC) that are in the operations phase. Principal assets include the Vertical Motion Simulator, a large motion system, and its supporting cabs, laboratories, and equipment, that provide scientists and engineers with tools to explore, define, and resolve issues in both vehicle design and missions operations. The Cockpit Motion Facility and its supporting suite of simulators (the Differential Maneuvering Simulator and the Visual Motion Simulator) and other central support facilities at LaRC are designed to support aeronautics and space flight vehicle research studies in which motion cues are critical to the realism of the experiments being conducted.

SCAP sustains thermal-vacuum, vacuum, and acoustic chambers at NASA facilities (Glenn Research Center, Goddard Space Flight Center, Jet Propulsion Laboratory, Johnson Space Center (JSC), Kennedy Space Center, Marshall Space Flight Center, and Plum Brook Station) that simulate conditions during launch and in space environments. These assets are large enough to accommodate a spacecraft with adequate space surrounding the structure for safe, easy access while inside the chamber. Chambers with minimum outline dimensions of 10 by10 ft will generally meet this provision. These chambers have the capability of producing pressures of one by 10-2 torr or lower and thermal shrouds capable of liquid nitrogen temperatures or lower. Acoustic chambers are capable of generating approximately 150 decibels at frequencies in the range of 25 to 1000 Hertz. These chambers perform significant risk mitigation for most of NASA payloads launched into space as well as many in other government agencies such as National Oceanic and Atmospheric Administration, and DoD. Almost all spacecraft launched into space must first be tested in one of NASA's thermal vacuum chambers.

SCAP sustains arc jet complexes located at ARC and JSC. An arc jet provides simulated high temperature, high velocity environments that support the design, development, test, and evaluation activities of thermal protection materials, vehicle structures, aerothermodynamics, and hypersonics. A gas (typically air) is heated and accelerated to supersonic/hypersonic speeds by a continuous electrical arc. This high temperature gas passes over a test sample, producing an approximation of the surface temperature and pressure environments experienced by a vehicle on atmospheric entry. Arc jet testing has been critical in the safe return from orbit of space shuttles with tile damage. In addition, arc jet testing performed essential validation of materials for the Mars entry missions such as Mars Science Laboratory. The Dragon spacecraft, made by the commercial company Space Exploration Technologies and which recently completed an orbital test flight, completed heat shield development testing at NASA's arc jet facility. NASA maintains two of the four arc jets facilities in the U.S. providing a critical national capability.

Mission Directorate:	Cross-Agency Support
Theme:	Agency Management and Operations
Program:	AMO Civil Service Labor and Expenses

FY 2012 Budget Request

Budget Authority ($ millions)	FY 2010	Ann CR. FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
FY 2012 President's Budget Request	**0.0**	**-**	**304.9**	**309.3**	**322.2**	**336.8**	**352.0**
AMO Civil Service Labor and Expenses	0.0	-	304.9	309.3	322.2	336.8	352.0

Note: This program contains labor funding, both salary and benefits, for civil service employees at NASA Headquarters. In addition, AMO Civil Service Labor and Expenses provides $18.7 million for civil service personnel costs such as institutionally-funded training and permanent change of station.

Program Overview

This program contains labor funding, both salary and benefits, for civil service employees at NASA Headquarters, as well as other Headquarters personnel costs such as institutionally funded training. It also contains labor funding for Agency-wide personnel costs such as Agency training, and funding for workforce from multiple Centers who provide the critical skills and capabilities required by the other Agency-wide programs outlined within this mission support area.